REMARKS

This is intended as a full and complete response to the Final Office Action dated June 10, 2009, having a shortened statutory period for response set to expire on September 10, 2009. Claims 1 – 2 and 82 have been amended and new claim 83 has been added to more clearly recite certain aspects of the invention. Support for the amendments and the new claim may be found throughout the specification, including Figures 1 & 3 and page 13, lines 11-22. No new matter has been introduced by the amendments or the new claim presented herein. The amendments have been made to put the claims in condition for allowance or in better condition for an appeal. Please reconsider the claims pending in the application for reasons discussed below.

Applicants thank the Examiner for considering the previous arguments and amendments filed March 25, 2009 as having overcome the 102(b) rejection over US Patent No. 4,719,987 ("George") and the 112 rejections.

Claim 82 stands rejected under 35 U.S.C. § 112, first paragraph for containing subject matter which was not described in the specification. Claim 82 has been amended to an independent claim that includes two deflector devices, wherein both deflector devices are configured to position the source array on both sides of a center line of a towing vessel during a seismic survey. Support for the amendment may be found throughout the specification, including page 6, lines 10-12 and page 11, lines 6-9 of the specification, and claim 1. Applicants believe that the amendment has overcome the 112 rejection. Withdrawal of the rejection is respectfully requested.

Claims 1-2, 5, 8-9, 12-16, 18-23 and 25-26 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by U.S. Patent No. 4,729,333 ("Kirby"). Claim 1 has been amended to now include "wherein the deflector device is submerged underwater." Support for this amendment may be found throughout the specification, including Figures 1 & 3 and page 7, lines 21-23. Applicants respectfully submit that Kirby does not teach this newly added limitation. In contrast, Kirby discloses a remotely-controllable, surface-referenced paravane for use in towing an object in a body of water having a **buoyant** hull such that the buoyant hull provides the buoyancy necessary for the paravane **to float** on the surface of the body of water. (See Kirby, column 5, lines 30-32). As such, Kirby teaches away from a seismic survey system for use in water

having a source array and an independently steerable deflector device, wherein the deflector device is **submerged underwater**, as recited in claim 1. For these reasons, claim 1 is patentable over Kirby. Claims 2, 5, 8-9, 12-16, 18-23 and 25-26 are also patentable over Kirby, since they depend from claim 1. Withdrawal of the rejection is respectfully requested.

Furthermore, claim 2 has been amended to now recite "wherein the source array trails **directly behind** the independently steerable deflector device in the inline direction." Support for this amendment may be found throughout the specification, including Figures 1 and 3, page 8, lines 5-9 and page 12, lines 24-26. Applicants respectfully submit that Kirby does not teach this newly added limitation. In contrast, Kirby describes its source array as being located on a line parallel to its deflector, and **not directly behind** its deflector device. (See Kirby, Figure 7). For this reason, claim 2 is further patentable over Kirby. Withdrawal of the rejection is respectfully requested.

With regard to claim 5, the Examiner takes the position that Kirby discloses that the positioning unit is mounted on the source array, and wherein the positioning unit provides a controller with the location of the source array in column 7, line 65 to column 8, line 28. The relevant portion of Kirby is reproduced below for the Examiner's convenience.

> It is desired to maintain the lateral offsets S_1 and S_2 between the pathway of the vessel 20 and the two seismic sources 56 as precisely as possible during the time the seismic vessel is traversing the survey area. In order to do so, remotely controllable paravane 10 must be maintained as nearly as possible at a lateral offset of P. This is accomplished by continually **monitoring the position of paravane** 10 with respect to vessel 20 and remotely adjusting the angular position of rudder 16 so as to compensate for any changes resulting from variations in wind, waves, currents, or the speed of vessel 20.
>
> The actual course of paravane 10 will likely vary within certain limits as indicated by the dashed line 58 in FIG. 7. The amount of variation, ΔP, will be dependent on the sensitivity of the system used to detect and compensate for position changes of paravane 10. For example, if detection of position changes is done visually, ΔP may be substantial. On the other hand, ΔP can be substantially minimized through the use of electronic range and azimuth measuring instrumentation together with an **automatic computer** (not shown) **located on board vessel** 20. Output from the range and azimuth measuring instrumentation would be

> continuously monitored by the computer which would issue appropriate instructions through the radio wave link to correct for any changes in the position of paravane 10. A rudder position sensor (not shown) on board paravane 10 might also be used to continuously monitor the position of rudder 16 and to indicate when the rudder has reached its maximum movement. (Kirby, column 7, line 66 to column 8, line 28).

As shown above, Kirby does not even mention a source array, let alone mounting a positioning unit on the source array. In contrast, Kirby describes monitoring the position of the paravane using an automatic computer located on the **board vessel**. Therefore, Kirby fails to teach a positioning system having a positioning unit mounted on the source array, and wherein the positioning unit provides a controller with the location of the source array, as recited in claim 5. Therefore, claim 5 is further patentable over Kirby. Withdrawal of the rejection is respectfully requested.

Claims 6-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kirby in view of U.S. Patent No. 5,319,609 ("Regnault"). Neither Kirby nor Regnault, alone or in combination, teaches or discloses an independently steerable deflector device coupled to the source array, wherein the deflector device controls a position of the source array by changing an angle of attack of the deflector device with respect to a direction of a tow while maintaining the source array in a substantially inline direction, and wherein the deflector device is submerged underwater, as recited in claim 1. Since claims 6-7 depend from claim 1 and since neither Kirby nor Regnault, alone or in combination, teaches, discloses or suggests all the limitations of claim 1, claims 6-7 are therefore also patentable over Kirby and Regnault. Withdrawal of the rejection is respectfully requested.

Claim 24 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kirby in view of U.S. Patent No. 4,719,987 ("George"). Neither Kirby nor George, alone or in combination, teaches or discloses an independently steerable deflector device coupled to the source array, wherein the deflector device controls a position of the source array by changing an angle of attack of the deflector device with respect to a direction of a tow while maintaining the source array in a substantially inline direction, and wherein the deflector device is submerged underwater, as recited in claim 1. Since claim 24 depends from claim 1 and since neither Kirby nor George, alone or in

combination, teaches, discloses or suggests all the limitations of claim 1, claim 24 is therefore also patentable over Kirby and George. Withdrawal of the rejection is respectfully requested.

Claims 27-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kirby in view of U.S. Patent No. 4,890,568 ("Dolengowski"). Neither Kirby nor Dolengowski, alone or in combination, teaches or discloses an independently steerable deflector device coupled to the source array, wherein the deflector device controls a position of the source array by changing an angle of attack of the deflector device with respect to a direction of a tow while maintaining the source array in a substantially inline direction, and wherein the deflector device is submerged underwater, as recited in claim 1. Since claims 27-30 depend from claim 1 and since neither Kirby nor Dolengowski, alone or in combination, teaches, discloses or suggests all the limitations of claim 1, claims 27-30 are therefore also patentable over Kirby and Dolengowski. Withdrawal of the rejection is respectfully requested.

Applicants notice that there is no prior art rejection with respect to claim 82. The only rejection over claim 82 is a 112 rejection, and claim 82 has been amended to overcome the 112 rejection. Accordingly, Applicants assume that claim 82 is in condition for allowance.

New claim 83 has been added to more clearly recite certain aspects of the invention. Support for new claim 83 may be found throughout the specification, including page 12, lines 19-28 and page 13, lines 11-22. Applicants respectfully submit that none of the prior art references of record teaches the limitations recited in new claim 83.

In conclusion, the references cited by the Examiner, neither alone nor in combination, teach, show, or suggest the claimed invention. Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

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